

ABSTRACT

During the selection period T_r , display column electrodes receive two additional identical voltage levels whose polarities are symmetric about the reference voltage V_0 and the third additional V_0 -level of constant duration applying between the voltage levels of different polarities. The additional opposite-polarity levels allocated to the boundary portions of the period T_r . All levels are applied to the signal electrode in direct or in reverse order. The allocation of the levels alternates in succeeding periods T_r , on adjacent column electrodes, in succeeding frame periods. The voltage pulses to signal electrodes are split into a groups being related to different electrodes and shifted in time. The shifting times are changed in the course of time (Fig.21). The driving device incorporates output block which output resistances for different voltage levels have the same values. The display electrodes receive a compensation voltages that are independent of image patterns. The pulse shapes provide self-compensation of spurious changes of the mean square voltages on LC sells. For the two-line addressing mode, column-driving voltages have the informational and quasi-reference equalizing components. Row and column driving voltages are set equal to $|V_{ro}|\sqrt{1-\eta}$ and $|V_{co}|\sqrt{1+\eta}$, where η is the voltage adjustment parameter. N_{\max} of the display is no less than $N_{\max 0}$ determined for a particular voltage-timing diagram. All embodiments of the invention are complement each other. The aim is to improve drastic the image uniformity and contrast, and to increase of the display size and operation speed.